



A COMPARATIVE STUDY OF CARDIOVASCULAR ENDURANCE BETWEEN GOVERNMENT AND PRIVATE HIGH SCHOOL GOING BOYS OF DBRUGARH DISTRICT OF ASSAM

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ABSTRACT: The purpose of the study was to determine the difference of Cardiovascular Endurance between Government and Private High Schools boys of Dibrugarh district of Assam. 80 (Eighty) boys from Government High School (40) and Private High School (40), age ranging from 14 to 16 years were selected as the subject. The data pertaining to the study were collected by employing the Modified Harvard Step Test and the t-ratio statistical technique was employed to compare the mean value at 0.05 level of confidence. On the basis of result it was conclude that insignificant difference was observed in the Cardio Vascular Endurance between both the groups. It was also observed that the Government High School going boys have better Cardiovascular Endurance than Private High School going boys.

Key Words: Cardiovascular Endurance; Govt. High School; Private High School

1. INTRODUCTION

To achieve high performance in all sports there required five motor qualities - Strength, Speed, Co-ordination, flexibility and Endurance [1]. The Endurance is the most essential motor ability in the purpose of doing a motor task for a prolong period of time. Endurance is highly trainable motor quality [2].

Endurance is characterized by the maintenance of working capacity and by the degree of resistance of the organism against fatigue and against the influence of unfavorable environment condition. Endurance is depending upon the aerobic capacity of the sportsperson. Aerobic capacity is related to heart. Capacity of heart mean cardio input and output of blood from heart, which increase the VO_2 max in the working muscles [3]. The muscle of the heart and blood vessels must be strong enough to send the required amount of oxygen and nutrition, through the blood. So, it can be said that cardiovascular fitness represents one's whole health. Physical fitness is the capability of heart, blood vessels, lungs and muscles, to function at operative efficiency [4].

The Endurance is subdivided in to Cardiovascular Endurance and Muscular Endurance. Cardiovascular Endurance is the ability of the heart to provide oxygen to muscles during physical activity for a prolong period of time [5]. Cardiovascular system is input and output of the blood from the heart to flow to the working muscles. During exercise, heart rate combines with stroke volume to provide an appropriate, at maximal or



near maximal results of work. Body might adjust to provide the optimal combination of heart rate and stroke volume to maximize the blood flow to active muscle and increase VO_2 max.

The growth and development of a child passes through various stages Endurance can develop from pre-school age to adolescence stage (15-16 years). Endurance can be improved to a high level in adolescence [6]. The benefits of regular physical activities, in children and youth, are well documented.

Cardiovascular tests have shown possible relationship, sometimes, with functional manifestations cardio respiratory endurance. In this study the research scholars compared the cardiovascular endurance between government and private high schools male students of Dibrugarh district of Assam [7].

2. Methodology:

For the present study 40 (forty) male Private High Schools going boys and 40 (forty) male Government High School going boys of Dibrugarh District of As sam were selected as the subjects randomly. The age of the subjects was ranged from 14 to 16 years. To collect the data Modified Harvard Step Test was used and the pulse of all the three half minute counts are recorded are added together and a fitness index is calculated by employing the FI formula. For the statistical analysis t -ratio statistical technique was employed. The level of significance was kept at 0.05 to test the hypothesis.

3. Result and Discussion:

The result of the present study is presented in the following table.

TABLE -1
Comparison between the Means of Government and Private High Schools going Boys in Cardiovascular Endurance

School	Mean	Standard deviation	Mean difference	Standard error	t - ratio
Govt. high schools boys	62.66	10.90	1.34	2.78	0.69 [@]
Private high schools boys	61.32	13.80			

[@] Insignificant at 0.05 level of confidence Tabulated $t_{0.05(78)} = 1.9908$

The table reveals that the obtain t-ratio value of 0.69 lesser than the tabulated t-value of 1.9908; hence statistically there is no significant difference in the means of cardiovascular endurance of Government High Schools boys and Private High Schools boys.

The comparison of means has been graphically shown in figure below.

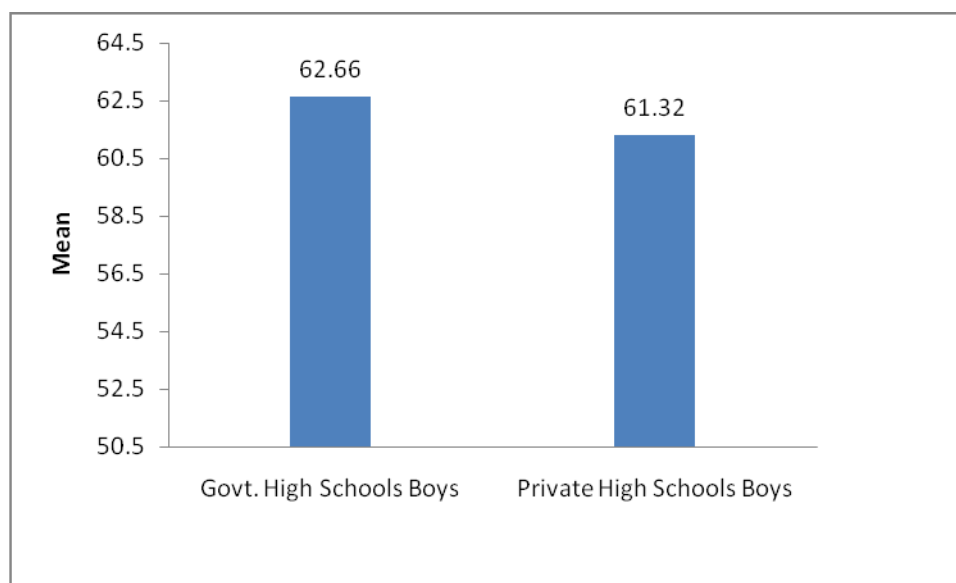


Figure: 1
Comparison of Means of Cardio Vascular Endurance between Government High Schools Boys and Private High Schools Boys.

4. Discussion of Findings:

The above mentioned table and figure shown that there is no significant mean difference in cardiovascular endurance of government high schools boys and private high schools boys of Dibrugarh district of Assam. It may be attributed to the fact that both the government high schools boys and private high school boys might be involved equally in the various games and sports activities in the school or off the school. But as most of the government schools boys are from low socio-economic background family, they might have to involve in vigorous physical activities for the fulfillment of their daily needs. On the other hand most of private schools boys are from good family background so that they might have to do less physical activity. But in comparison to Govt. High School, Private High Schools have abundant facilities for games and physical education which help boys to be fit.

5. Conclusion:

On the basis result of the study it was conclude that there is in significant difference in the means of cardiovascular endurance of Government and Private High Schools boys. It was also conclude that the Govt. High School boys have the better cardiovascular endurance than Private High Schools boys ($62.66 > 61.32$).

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